

Customer No.: 31561
Docket No.: 10573-US-PA
Application No.: 10/604,793

REMARKS

Present Status of the Application

The specification and drawings are objected to because "wafer carrierbeam 104" should be corrected and "wafer carrier shelf" is not shown in the drawings. Claims 2-7 are rejected under 35 U.S.C 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Office Action rejected claims 1, 8, 10, 13, 14 and 15 under 35 U.S.C. 102(b), as being anticipated by Jacobs et al. (U.S. 3,489,608). The Office Action rejected claims 9, 11, 12, 16, 17, 18 under 35 U.S.C. 103(a) as being unpatentable over Jacobs in view of Tomita (U.S. 5,634,980). The Office Action rejected claims 1, 8-13, 15-18 under 35 U.S.C. 103(a) as being unpatentable over Tomita (U.S. 5,634,980). The Office Action also rejected claims 2 and 6 under 35 U.S.C. 103(a) as being unpatentable over Tomita (U.S. 5,634,980) in view of Nonomura (U.S. 5,601,645).

In addition, the office action also stated claims 3-5 and 7 are allowable if rewritten to overcome the rejections and include all of the limitations of the base claim and any intervening claims.

Applicant has amended "wafer carrier shelf" to "wafer carrier beam" and corrected the typographic errors in the specification.

Applicant has also amended claims 1, 3-7 and canceled claims 2 and 13-18 to more clearly define the present invention. After entry of the foregoing amendments, claims 1, 3-12 remain pending in the present application, and reconsideration of those claims is respectfully requested.

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Discussion of Office Action Objections

The specification and drawings are objected to. Applicant has amended "wafer carrierbeam 104" to "wafer carrier beam 104" and amended "wafer carrier shelf" to "wafer carrier beam" in the specification to overcome the objections.

Rejections under 35 U.S.C 112, second paragraph

The office action rejected claims 2-7 under 35 U.S.C 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding to claim 2, applicant has canceled "wafer carrier apparatus" in claim 1 and added the limitation of claim 2 to claim 1 to overcome the rejection.

Regarding to claim 3, applicant has amended as "wherein each of the wafer carrier beams extends from the upper sidewall to the inside of the sampling chamber and passes the upper sidewall of the sampling chamber to the outside of the sampling chamber" to overcome the rejection. The amendment of claim 3 is shown in Fig. 1, and no new matter is entered.

Regarding to claim 4, applicant has amended as "wherein each of the wafer carrier beams further comprises a rotating handle disposed on the one end of the wafer carrier beam at the outside of the sampling chamber" to overcome the rejection. The amendment of claim 4 is shown in Fig. 1, and no new matter is entered.

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Regarding to claims 5-7, their dependency is amended.

It is believed after amending claims 1, 3-7 and canceling claim 2, the rejections under 35 U.S.C 112, second paragraph can be overcome.

Rejection under 35 U.S.C 103 (a)

The Office Action rejected claims 1, 8, 10 under 35 U.S.C. 102(b), as being anticipated by Jacobs et al. (U.S. 3,489,608). The Office Action also rejected claims 2 and 6 under 35 U.S.C. 103(a) as being unpatentable over Tomita (U.S. 5,634,980) in view of Nonomura (U.S. 5,601,645). Applicant has added the limitation of claim 2 into claim 1. Applicant respectfully submits the amended claim 1 is patentable because a *prima facie* case of obviousness has not been established by the Office Action.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

"See M.P.E.P. 2143, Latest Revision August 2006".

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The present invention is in general related to a wafer surface ion sampling system as claim 1 recites:

Claim 1. A wafer surface ion sampling system, comprising:

a sampling chamber, comprised an upper part and a lower part, wherein the upper part accommodates a wafer, and the lower part has a funnel shape and comprises an extract solution collection opening;

a plurality of wafer carrier beams, arranged around an upper part of a sidewall of the sampling chamber dispersedly, wherein each wafer carrier beam comprises a first wafer anchoring pin disposed on a peripheral surface of the wafer carrier beam, wherein the wafer anchoring pin extends in a first direction different from the direction which the wafer carrier beam extends;

an extraction liquid spraying apparatus, disposed at a top part of the sampling chamber to spray an extraction liquid on a surface of the wafer; and

an extraction liquid supply apparatus, connected to the extraction liquid spraying apparatus to provide the extraction liquid to the extraction liquid spraying apparatus.

The office action stated Tomita remains silent about the specificities of wafer carrier, including a plurality of wafer carrier beams comprising anchoring pins disposed on a peripheral surface of the wafer carrier beams. Such structural elements are utilized in the art for supporting the wafer during processing. Nonomura describes substrate spin treating apparatus comprising substrate holder cylindrical shanks 5a and projections 5c disposed on top surfaces of the shanks. However, applicant respectfully submits Nonomura teaches the holder cylindrical shanks 5a are disposed on the turntable 3. In addition, the cylindrical shanks 5a and projections 5c extend in the same direction (please see Figs. 3 and 5). However, in claim 1 of the present application, the

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wafer carrier beams are arranged around *an upper part of a sidewall of the sampling chamber dispersedly*, and the wafer anchoring pin extends in a first direction *different from the direction which the wafer carrier beam extends*. Nonomura fails to teach the features as above mentioned. Therefore, applicant respectfully submits the prior art reference references combined do not teach or suggest all the limitations in claim 1.

For at least the foregoing reasons, Applicant respectfully submits that independent claim 1 patently defines over the prior art references, and should be allowed. For at least the same reasons, dependent claims 6, 8-12 patently define over the prior art as a matter of law, for at least the reason that these dependent claims contain all features of their respective independent claim.

The Office Action rejected claims 1, 8, 10, 13, 14 and 15 under 35 U.S.C. 102(b), as being anticipated by Jacobs et al. (U.S. 3,489,608). The Office Action rejected claims 9, 11, 12, 16, 17, 18 under 35 U.S.C. 103(a) as being unpatentable over Jacobs in view of Tomita (U.S. 5,634,980). The Office Action rejected claims 1, 8-13, 15-18 under 35 U.S.C. 103(a) as being unpatentable over Tomita (U.S. 5,634,980).

Applicant has amended claim 1 with the addition of the limitation of claim 2 and canceled claims 13-18. It is believed the amended claim 1 is in proper condition for allowance as disclosed above because the prior art references fail to teach or suggest each and every element of claim 1, from which claims 8-12 depend. Since claim 1 is patently defines over the prior art

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references and should be allowed, its dependent claims 8-12 are also patentable as a matter of law.

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CONCLUSION

For at least the foregoing reasons, it is believed that the pending claims are in proper condition for allowance. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

Respectfully submitted,

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